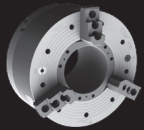


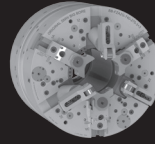
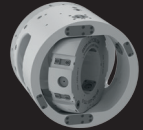




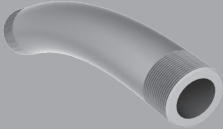







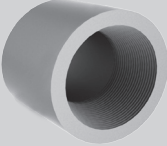

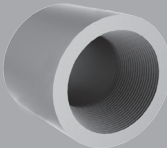




# Chuck finder for Oil Country Tubular Goods:

## Introduction

- Straight Pipe
- Bent Pipe
- Couplings

Chuck Type Machining OCTG Product	 BB-N/BB-N-ES	 BB-SC	 BB-AZ2G	 BB-FZA2G	 SF-RZ/SF-RAZ
 <b>Straight Pipe</b>	 Page 12/14	 Page 16	 Page 18		
 <b>Bent Pipe with shimming</b>	 Page 12/14	 Page 16	 Page 18		
 <b>Bent Pipe with external centering chuck</b>			 Page 18		
 <b>Bent Pipe with integrated centering chuck</b>				 Page 22	
 <b>Threading of Couplings in 1 set up</b>					 Page 28/30
 <b>Threading of Couplings in 2 set ups</b>	 Page 32/34				 Page 28/30



**Ideal**



**Possible**

## Performance Characteristics

## Explanation of the end product properties

### Big Bore



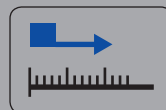
Big Bore is synonymous with **self contained air chucks with large through holes**. Big Bore chucks allow for the full spindle bore of the machine to be utilized.

### Quick Clamping Circle



Optimal sized air feeds and valve systems guarantee a **quick clamping cycle**.

### ES



**ES** chucks offer **extended jaw stroke** for greater clearance to ensure safe loading and unloading of pipe.

### Spring Clamp



**Spring clamp technology** ensures the quickest clamping cycles and the highest degree of safety under any conditions.

### Low Maintenance

**proofline® series**  
fully sealed – low maintenance

**Proofline** chucks are **fully sealed, low maintenance** allowing for long service intervals, minimizing machine downtime.

### AZ



**AZ** chucks offer the versatility of clamping either **compensating** or **self centering**.

### FZA



**FZA** chucks **sequence 3 centering jaws** along with **3 compensating jaws** integrated within the same chuck body.

1bar x 14.5 = psi

### Conversion Table (US)

1 mm	=	0.03937 Inch
1 bar	=	14.5 psi
1 kN	=	220.46 lbf
1 kg	=	2.2046 lbs

1 cm <sup>2</sup>	=	0.155 square inches
1 liter	=	1.05 quarts (qt)
1 kg·m <sup>2</sup>	=	3417 lb square inches
1 liter/min	=	0.264 gallon/min

Data sheet						Performance Characteristics		
OCTG chuck	Size	Outside Dia. Max	Work piece capacity	Time for a full clamping	Time for a full opening	Max. Grip force (at max. pressure)	Height of chuck without adapter	Weight without jaws and adapter
	in mm	in mm	in mm	Max	Max	in kN	in mm	in kg
<b>BB-N</b> ■ Big Bore ■ Quick Clamping Circle	400-140	467	140	-	-	266	196	155
	470-191	470	191	4.5	3.0	191	196	160
	500-205	570	205	6.0	6.0	350	225	230
	500-230	570	230	6.0	6.0	316	225	200
	600-275	605	275	6.0	6.0	333	225	270
	630-310	685	310	6.5	6.5	366	263	420
	800-410	850	410	7.0	5.5	550	305	650
<b>BB-N-ES</b> ■ Big Bore ■ Quick Clamping Circle ■ Extended Stroke	400-140	467	140	on request	on request	216	240	200
	470-191	470	191	4.5	3.0	191	240	195
	500-205	570	205	6.0	4.5	316	280	340
	500-230	570	230	6.0	4.5	283	280	325
	600-275	605	275	6.0	4.5	308	280	350
	630-325	685	325	6.0	4.5	333	307.5	630
	850-375	850	375	7.0	5.5	333	354	970
	1000-560	1000	560	7.5	6.0	283	332	960
<b>BB-SC</b> ■ Big Bore ■ Spring Clamp ■ Low Maintenance	600-275	750	275	3	3	150	320.5	516
	850-395	925	395	3	3	170	375.5	1025
	1020-565	1095	565	4.5	4.5	170	375.5	1256
<b>BB-AZ2G</b> ■ Big Bore ■ Self centering or compensating ■ Extended Stroke	685-275	685	275	on request	on request	266	380.5	800
	740-330	740	330	on request	on request	266	380.5	875
	800-390	800	800	on request	on request	300	380.5	1000
	1000-560	1000	560	on request	on request	300	380.5	1420
<b>BB-FZA2G</b> ■ Big Bore ■ Sequence chuck	740-275	740	275	on request	on request	149	516.5	1100
	800-330	800	330	on request	on request	133	516.5	1080
	920-390	920	390	on request	on request	255	546.5	1900
<b>SF-RAZ</b> ■ Hydraulic indexing chuck ■ Low Maintenance	750	750	185	2	2	250	456	1018
	840	840	275	2	2	250	501	1286
	950	950	368	2	2	250	560	1650

Clamping times have been measured with the corresponding original SMW-AUTOBLOK air control unit on the SMW-AUTOBLOK test stand. For more details please contact SMW-AUTOBLOK.

# Overview Pipe

## Customer's OCTG product:

- Straight pipe
- Bent pipe

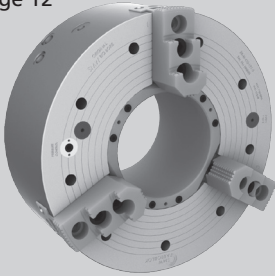
### CHUCK

### APPLICATION

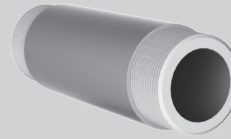
### OCTG PRODUCT

### CUSTOMER BENEFITS

**BB-N**  
Page 12

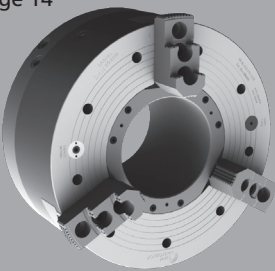


Threading of straight pipe with the original SMW Big Bore Type BB-N.

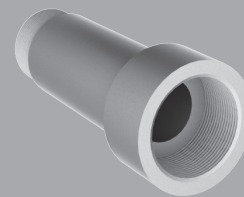


- **Quick jaw movement** more pipe per hour
- Can be used for other work pieces besides piping
- O.D. and I.D. clamping

**BB-N-ES**  
Page 14

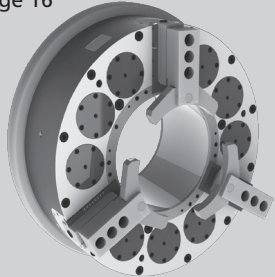


Threading of straight pipe with upset ends with the original SMW Big Bore Type BB-N-ES.

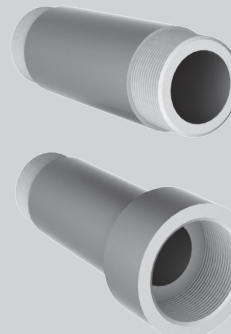


- **Quick jaw movement** more pipe per hour
- Large jaw stroke for easy loading of pipe and less danger of damaging threads when unloading

**BB-SC**  
Page 16

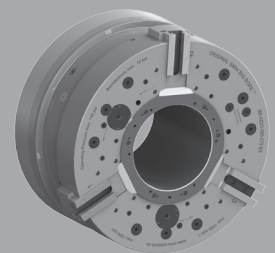


High production **spring clamp** chuck for threading of straight pipe with or without upset ends with the original SMW Big Bore Type BB-SC.

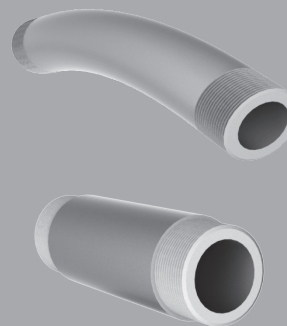


- **Full jaw stroke in 2 seconds** for highest productivity
- Fully sealed/low maintenance for highest availability of the machine
- Safe clamping of pipe even in longer machining processes with spring clamp technology

**BB-AZ2G**  
Page 18

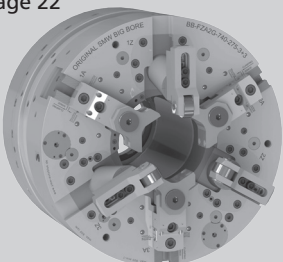


Threading of straight and bent pipe with the original SMW Big Bore Type BB-AZ2G.



- **Self centering or compensating clamping** for universal use
- Quick jaw movement
- External centering device needed when used in compensating mode
- O.D. clamping only

**BB-FZA2G**  
Page 22



Threading of straight and bent pipe with integrated centering jaws with the original SMW Big Bore Type BB-FZA2G.



- **Integrated centering jaws for the pipe** = no external centering device needed
- Quick jaw movement
- Fully automatic programmable cycle

# BIG BORE® BB-SC

INCH serration

## Front-end spring clamp power chucks EXTRA LARGE THROUGH HOLE Ø 275 - 565 mm

- chuck size 600 - 1020
- Clamping with spring packs
- Rapid and clamping stroke

### Application/customer benefits

- End machining of long pipe/self centering clamping
- Long jaw stroke to clear upset piping
- Highest productivity/open and clamp time < 3 sec.
- Low maintenance = high availability of the machine
- Step mode for partial opening/clamping for shimming
- Full spindle bore can be used

### Technical features

- Self centering clamping with either 9/6/3 spring packs
- Encapsulated spring packs
- Opening via integrated cylinder
- Permanent grease lubricated for constant grip force
- Step mode for opening/clamping for shimming
- Long jaw stroke with rapid and clamping stroke
- Low air consumption
- Stroke control
- **proofline® chucks** = fully sealed – low maintenance

### Standard equipment

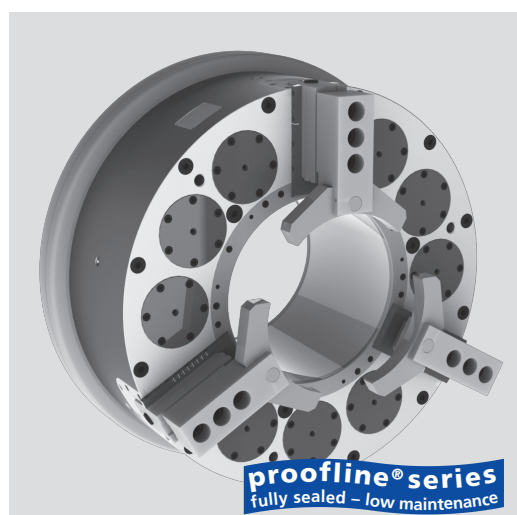
Chuck with mounting bolts  
1 set of soft top jaws  
1 set of T-nuts and bolts

### Ordering example

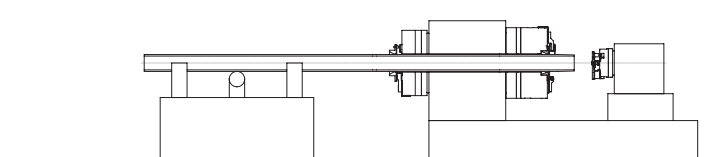
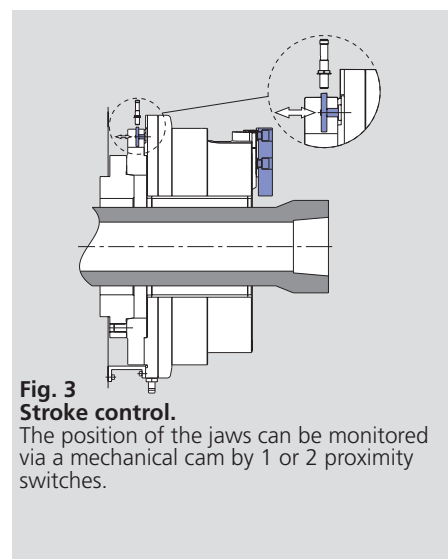
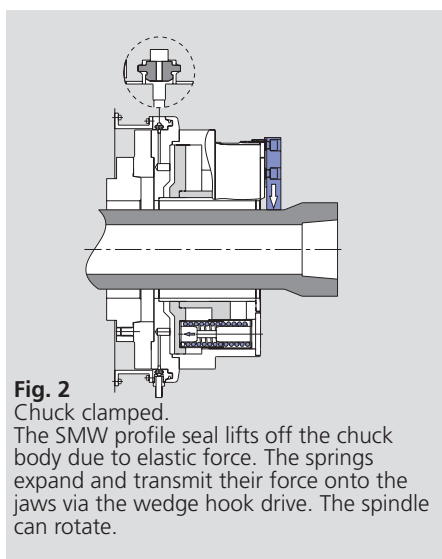
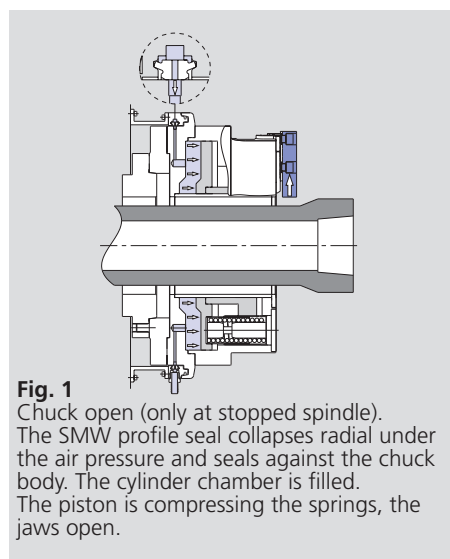
Big Bore SC 850-395  
Id. No. 053350

### Accessories

Air control AC-SC



## The reliable principle: Clamping via encapsulated spring packs/opening via air cylinder

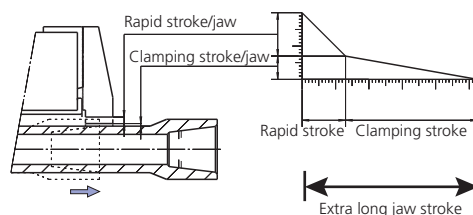


End machining of tubes with front and rear chucks

### Technical data

SMW-AUTOBLOK Type		BB-SC 600-275			BB-SC 850-395			BB-SC 1020-565		
Id. No.		053540			053350			053570		
Chuck trough hole	mm (inch)	275 (10.83")			395 (15.55")			565 (22.24")		
Total stroke per jaw	mm (inch)	25.4 (1")			27 (1.06")			27 (1.06")		
Rapid stroke per jaw*	mm (inch)	16.9 (0.67")			15 (0.59")			15 (0.59")		
Clamping stroke per jaw	mm (inch)	8.5 (0.33")			12 (0.47")			12 (0.47")		
Operating pressure at 9 springs	bar (psi)	5 (73)			5 (73)			5 (73)		
Max. gripping force at 3/6/9 springs	kN (lbf)	50 (11240)	100 (22480)	150 (33721)	57 (12814)	113 (25403)	170 (38218)	57 (12814)	113 (25403)	170 (38218)
Max. speed	r.p.m.	1000			700			420		
Air consumption to open at 5 bar (73 psi)	liter	60			115			139		
Weight (without jaws)	kg (lbs)	510 (1124)			930 (2050)			1260 (2779)		
Moment of inertia	kg-m <sup>2</sup>	34			101			223		

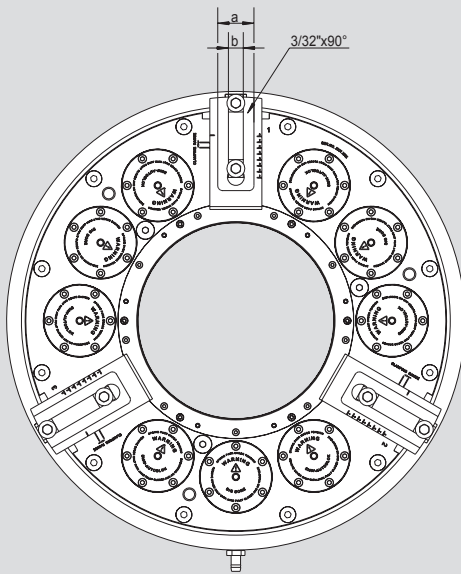
\* must not be used for clamping



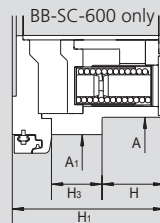
# BIG BORE® BB-SC

INCH serration

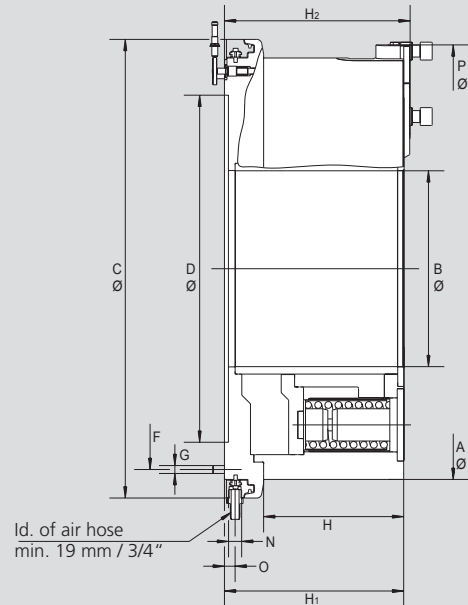
## Main dimensions and technical data



Opening pressure with all springs mounted  
min. 5 bar (73 psi), max. 8 bar (116 psi)



BB-SC-600 only



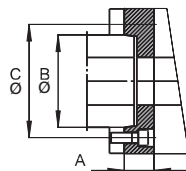
Subject to technical changes.

For more detailed information please ask for customer drawing.

SMW-AUTOBLOK Type			BB-SC 600-275	BB-SC 850-395	BB-SC 1020-565
Mounting			Z520	Z700	Z870
	A	mm	605	850	1020
(BB-SC-600-275)	A1	mm	675	-	-
Through hole	B	mm	275	395	565
	C	mm	750	925	1095
	D H6	mm	520	700	870
	F	mm	640	810	980
	G		M12 (12x)	M16 (12x)	M16 (12x)
	H		126.7	282.5	282.5
	H1		307.5	361.5	361.5
	H2		320.5	374.5	374.5
(BB-SC-600-275)	H3		102	-	-
	N		G 3/4"	G 3/4"	G 3/4"
	O		21.5	21.5	21.5
max. swing	P		655.8	902.8	1074
	a		58	73	73
	b		25.5	30	30
Rapid stroke		mm	16.9	15	15
Clamping stroke		mm	8.5	12	12
Total clamping stroke		mm	25.4	27	27

## Spindle-Adapters

### Spindle-Adapters ISO-A DIN 55026



BB-SC	600-275			850-395		1020-565		
Spindle nose	A11	A15	A20	A15	A20	A15	A20	A28
Id. No.	on request	053590	053591	053362	053358	on request	053595	053596